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CLAIMS

1. A computer product having stored therein distribution map data used to distribute a map through communication, the distribution map data comprising:

5 road data containing position information indicating positions of roads each extending over a plurality of area blocks; and

integrated name data including integrated name information for each road contained over a plurality of area
10 blocks instead of providing redundant name information for the road in correspondence to the individual area blocks.

2. A computer product according to claim 1, wherein:

the distribution map data comprise a data structure with
15 a plurality of layers of road data each corresponding to a specific scaling factor; and

the integrated name data include sets of name information each corresponding to a set of common road data contained in the plurality of layers without an overlap.

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3. A computer product according to claim 1 or claim 2, wherein:

the route is determined as a road from a start point to an end point based upon the road data.

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4. A distribution map data generating method for generating distribution map data used to distribute a map through communication, comprising:

5 extracting road data and background data corresponding to a route contained in a plurality of specified area blocks from road map data achieved by dividing into a plurality of area blocks road data containing road position information and background data containing road name information;

10 generating integrated name data containing integrated name information in correspondence to each set of common road data contained in the plurality of area blocks having been extracted without an overlap; and

generating the distribution map data by using the extracted road data and the integrated name data.

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5. A distribution map data generating method according to claim 4, wherein:

20 the distribution map data comprise a data structure with a plurality of layers of road data each corresponding to a specific scaling factor; and

the integrated name data include sets of name information each corresponding to a given set of common road data contained in the plurality of layers without an overlap.

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6. A distribution map data generating method according to claim 4 or claim 5, wherein:

the route is determined as a road from a start point to an end point based upon the road data,

5 the plurality of area blocks are each specified as an area through which the route passes; and

when extracting the road data and the background data indicating the route, road data and background data contained in an area ranging over a predetermined width along the route
10 are extracted based upon the road map data.

7. A distribution map data generating apparatus that generates distribution map data used to distribute a map through communication, comprising:

15 a storage means for storing road map data achieved by dividing into a plurality of area blocks road data containing road position information and background data containing road name information;

an extraction means for extracting road data and
20 background data corresponding to a predetermined route extending over a plurality of area blocks based upon the road map data;

an integrating means for integrating name information corresponding to each set of common road data contained in

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the plurality of area blocks having been extracted as
integrated name data without an overlap; and

a generating means for generating the distribution map
data by using the extracted road data and the integrated name
5 data.

8. A distribution map data generating apparatus according
to claim 7, wherein:

the distribution map data comprise a data structure with
10 a plurality of layers of data each corresponding to a specific
scaling factor; and

the integrated name data include sets of name
information each corresponding to a set of common road data
contained in the plurality of layers without an overlap.

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9. A distribution map data generating apparatus according
to claim 7 or claim 8, wherein:

the route is determined as a road from a start point
to an end point based upon the road data,

20 the plurality of area blocks are each specified as an
area through which the route passes; and

when extracting the road data and the background data
indicating the route, road data and background data contained
in an area ranging over a predetermined width along the route
25 are extracted based upon the road map data.

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10. A terminal device that displays a map by using
distribution map data generated at a distribution map data
generating apparatus according to any of claims 7 through 9,
5 comprising:

a reception means for receiving the distribution map
data transmitted from an external source; and

a display means for displaying at least part of a route
on a monitor based upon the road data in the received
10 distribution map data with roads names attached to the roads
on the route on display based upon integrated name data in
the received distribution map data.

11. A terminal device according to claim 10, wherein:
15 the distribution map data comprise a data structure with
a plurality of layers of data each corresponding to a specific
scaling factor; and

the integrated name data include sets of name
information each corresponding to a set of common road data
20 contained in the plurality of layers without an overlap.

12. A terminal device according to claim 10 or claim 11,
wherein:

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the distribution map data include road data and background data contained in an area ranging over a predetermined width along the route.

- 5 13 A terminal device according to any of claims 10 through 12, further comprising:

a position determining means for determining a display position for the integrated name data on a display screen.